# AGRICULTURAL DEPARTMENT.

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PUBLISHER'S NOTICE—All communications intended for this department should be addressed Prof. J. P. Stelle, Fort Worth, Tex.

CULTURE OF THE PEANUT.

Several patrons of The GAZETTE and correspondents of this department have asked for an article giving full directions with reference to the culture, management, etc., of the peanut crop. " A good deal on that subject has already appeared in these columus, but the evidently growing interest in peanut culture for Texas has secured the consent of our mind to go over it all once more in as few words as possible.

The most universally known common name for the crop is peanut. In some localities it is called ground nut, but this is not a safe name owing to the fact that the chufa is often called ground nut. An article referring to the ground nut, without a minute de scription, would leave the reader in doubt as to which of the two was meant. A very common name for it in the South is pindar, while the negroes of the Southern states almost invariably refer to it as "the goober." Its botanical name, that by which it is known to scientists in all parts of the civilized world, is Archis hypogrea,

Roasted peanuts are more or less extensively sold throughout the United States, in the winter season at least. More of them are consumed at the North than at the South, however-a Northern city without nearnt stands here and there all along its business streets would now be looked upon as a veritable curiosity. While the Southern cities are not yet fully up to the cities of the North in their patronage of peanut vendors, they are rapidly folling into line. There are fewer roasted peanuts consumed in Fort Worth than in any city of its size that we have yet seen, but the prominent signs of last winter convinced us that our people were fairly in the way of learning the art and getting their city into

To be sold as reasted peanuts does not cover near all the uses to which the product is now applied. . It takes thousands of bushels to make all the peanut candy sold, and additional thousands of bushels to fill all the demands of the chocolate manufacturers. In times past chocolate was made from chocolate nuts-the seeds of a small tropical tree known to science as Theobroma cacao-but not so now. Checolate manufacturers have learned that consumers will delek peanut "chocolate" with just as much relish as they would the other kind. and since peanuts of temperate America are much cheaper than chocolate nuts of the tropics, the chocolate of to-day usually tacks a great deal of being exactly in accord with the label on the package carrying a pleture of the tropical tree.

So you see, there exists little danger of our ever glutting the peanut market. The demand for the product, already very large, is rapidly on the increase with each

succeeding season, Most of the peanuts on the American market are raised in Virginia, Tennessee and North Carolina. Above Tennessee the crop cannot be made to succeed, hence we have in the peanut a crop climatically seoured to the South. We advocate peanut culture for Texas on account of knowing from our own personal familiarity with it in Tennessee, that Texas possesses every requirement of the crop, and furthermore because we know the crop to be a very

profitable one. he peanut does host an well-drained land of a friable character. A little sand in the composition of the soil adds to its advantages for the crop, owing to the fact that there is less discer of packing or baking. Most of our river or creek bottom lands are exactly right for it, provided they have natural drainage sufficient to prevent sogginess; that is, to prevent water from standing in the ground within three or four feet of the surface. Like clever and alfalfa the peanut is a tap-root, plant, and therefore would be damaged by a soggy sub-soil. By far the largest quantity of peanuts produced in Tennessee are grown upon the secand bottoms (above overflow) of the Tennessee river, famis much like our bottom

lands in Texas, though not near so good, The main thing, additionally to good natural drainage, is a soil not inclined to pack. If a purely clay soil is cultivated to the crop an abundance of vegetable matter should be turned into it to keep it frinkle. This should be attended to in fall preceding the string in which the crop is to be planted. Turn in vegetable matter-weeds, grass or anything else of that character-and let it rot through winter. The penaut needs a fairly good soil for best results, but not an extremely rich soil. like cotton or corn. And unlike cotton or corn It never makes the soil any poorer. Its long tap croot and deep-feeding peculiarities give it renovating characteristics about on a par with times of either clover or field peas,

Early in soring break the land deeply, and pulvering theroughly by the liberal us of a harrow. Lay off rows three and a half feet apart, and so soon as danger from frost is over drop the peas in hills two feet apart in the row, covering to the depth of from two to three inches. Don't hull the peas, as some recommend, but drop ped and all If builed they might come up a little sooner, but not enough sooner to be worth consideration; besides, the young plant needs the hull to feed upon ere it has fairly taken to the soil. Put four peas in each hill, as some will not come up. When up and established, thin down to two plants in the hill. In case of missing hills replant by transplanting from the surplus-the pennut transplants readily if handled in a damp

Never think of planting in ridges, and in all your after cultivation keep your land as level as you can. The after culture is extremely simple, nothing being required other than to keep down weeds and grass and to stir the surface slightly with a harrow or some other suitable implement, after a boating rain, to prevent packing. Lay by so soon as the plants are running sufficiently to be in the way of culture. If the working has left the hill in a slight depression it is best to go over the field, at the laying by, and with a hoe or a rake draw soil enough around the plants to leave

the hill on a level with the general surface. You will find people ready to tell you that the blossom ends of the vine must be covered to give the nut a chance to form under the ground. This would be a fatal error. as every biossom so covered would be destroved. The yellow flower springs from the stems, near the hills, and after having

clongates downwards. Should the flower be even several inches above the ground, the clongation will go on till the ground is reached and entered. An inch or so beneath the surface the small tubercle, which is to be the future seed pod, expands to the proper size and shape for the perfect fruit. It needs no help from any one. Any attempt at help would ruin it.

The crop runs well through the season, and hence need not be harvested till late. The deep tap roots keep the plants green even through long periods of severe drouth. When you are ready for harvesting bar off the rows with a turn plow, running pretty well down, and have a hand follow with a pronged hoe or potato digger, strlking down at the side of the hill and pulling it over into one of the furrows. Another hand follows, lifting the vines, shaking out the dirt and throwing them into small bunches or mows. Some gatherers dispense with the hos entirely, merely grasping the vines at each hill and pulling them up after the plow. This plan necessarily pulls off and leaves more peas in the ground than the other, especially if the surface happens to be a little packed. We'd always prefer using the hoe, for we think it invariably pays well to do so.

The next operation is to haul in the vines and scaffold them to dry. The scaffolds may be arranged in a barn or other building, or even under a shed, if protected at the sides from dashing rains. The vine may be piled loosely about two feet thick on the scaffold, and scaffelds may be pro vided one above the other so that a building can be made to hold a large quantity of vines. When thoroughly dry the peas are picked by hand and sacked for market. This work is usually performed by women and children (low-priced labor) or at odd spells. There is no need of hurry about it, as the peas will keep as well on the vines as anywhere else.

The vines will prove an excellent hav that all kinds of stock will much relish The leaves being thick will not crumble off like leaves of the field pea-they will han dle without crumbling about as well as do the leaves of red clover.

It would be impossible to harvest peanuts so closely as to leave none in the ground, but hogs will come in all right for the leavings. They will find every peanut left, and what they get will do them about as much good, bushel for bushel, as would

There are several varieties of the peanut, but we wouldn't know what variety to recpromend as best to plant unless we knew exactly what market the product was to be placed upon. Some varieties are most popular on some markets and others are most popular on other markets. Any large growing variety will sell well. As a rule the whiter the variety the better the nuts take, though there are some markets which prefer a large reddish variety known as the Carolina reds. If we were planting peanuts expressly for hog pasturage we'd plant a small variety called the Spanish peanut. It is hardier and more prolific than any other variety, but its nuts are too small for advantageous sale on any market.

# ANOTHER TEXAS POSSIBILITY

We love to talk of the many important though our people should never take advantage of them. But they will. It may not come while we are so thinly settled, and, as a consequence, there is no crying need that our people should hustle, but that kind of thing will not always pertain in the Lone Star state; besides, there are many men of many minds-and tastes-in this great world of ours, and it might be that a possibility pointed out might strike a particular people who are looking after just that kind of thing, and hence be the means of giving us a new colony located for the purpose of running a new industry. "Who knews!" as they say in the Orient.

The state of Florida has by some means won the sobriquet of "the land of flowers." While not at all desiring to wring her honors from Florida, we couldn't help showing in several articles of some months ago that Texas is really the land of flowers, so far as pertains to the United States of America. There are more beautiful and rich wildflowers in Texas, by far, than there are in five times her territory any where else on this continent. True, they are largely spring and early summer flowers, but un der irrigation flowers, the richest known to any country within the temperate zone, might be made almost perpetual-certainly so through all the long season intervening be tween the latest spring and the earliest fall frosts, more than nine months in the year.

But, says one, what of flowers in an economic point of view? We are proposing to show you. Mr. E. O. Painter, the talented and ever reliable editor of the Florida Agriculturist, not long ago paid his respects to a new Florida industry, the likes of which could be made to do better in Texas than anywhere else. He gave it to the publie that at Island Grove, Alachua county, in his state, there was a smart new wooden building having on it a sign board in bold letters, "Atlanta Perfumery Company." To satisfy himself that it actually meant something he visited the concern, where he found a veritable perfumery manufacturing plant in full blast. It had been located there on account of the suitableness of the region for growing flowers. Investigation showed that the company had plenty of money, and already the concern was driving a most decidedly paying business in its manufacture of perfumes.

Mr. Painter learned the prices being paid by the company for such materials as the plant was working. For tube roses the price was 15 cents per pound; Arabian jessamine, 15; cape jessamine, 13; heliotrope, 20: violets, 50: lemon verbena, 5c: rose geranium leaves, 4: rose geranium leaves and cuttings, 8; fragrant roses, 10; magnolia, 10; yellow jessamine, 20; American vanilla leaves (deer tongue), 11.

All of these products can be grown to the highest degree of excellence in Texas. The maguolia, yellow jessamine and American vanilla are wild growths attaining to the greatest perfection all along the eastern

border of the state The plant mentioned by Mr. Painter was a simple and inexpensive one. Its cost, all in running order, was about \$1800, and it | be found in cheaper production secured by

very little if any more so than the ordinary arragement of the piney woods for distilling turpentine.

While flowers were what the company specially wanted to buy, they were also doing a heavy work 'in the leaves of certain wild plants. Of these we have immense quantities on our great prairies of Texas. There are certain mints here qualified to make a delightful perfumery of that particular character, growing so thickly on our wide prairies that tons upon tons of them might be cut for the factory with an ordinary mowing machine.

Mr. Painter saw a "run" made by the plant. It was as simple as a run of whisky or turpentine. The plants or flowers were placed in the still, with water, and a fire cont up underneath in the usual way of listilling. There was about three hours of gradual boiling, after which steam was let through the "worm" in a condensing tank, and finally the distilled oil passed out into a receptacle to be run into suitable bond for containing it.

The atmosphere of the building was perraded with a delightful perfume; and more than a week after his visit the circular. which he brought away was so saturated with it that the children, upon putting it to their noses, cried out, "Oh! ice cream! ice cream to

When this plant was first established at Island Grove the people shook their heads and had their doubts about it. But it has conquered-the cash coming out promptly for everything that could be bought in the way of materials, soon had a marvelous effect on public opinion. And now all the country folks are planning to go in and win. Nearly everybody in the neighborhood is on the "get up and get, Eli," making arrangenents to plant tuberoses and rose geraniums and all sorts of sweet things, and very handsome profits are counted on.

Of course a new enterprise, like this, always has many difficulties to contend against at the start, and this one has had special troubles in that direction on account of the unusual late frosts, says Mr. Painter, yet, after all this, it could be safely counted apon for very fair profits. The distilling of perfumery is a most decidedly profitable business. We mention this matter of late frosts merely to show that the perfumery ndustry of Florida is not located below the frost line," wherever that may be. If Florida can make perfumery manufacturng profitable, to say that Texas, with her superior soils and, in most cases, equally as favorable climate, and with her grand array of rich indigenous perfume-carrying plants, could not do as much, would be to simply alk nonsense.

GOOD FARMING PAYS.

So says the editor of the American Cultirator, and certainly no man is better qualiled to know whereof he speaks than the editor of the Southern Cultivator. But it must be farming with the hands and the read, done on the farm, and not farming with the mouth performed at some crossroads store or political barbecue.

But, says the writer, there is a kind of infidelity, so to speak, among farmers, which prevents not a few who might be good farmers from making farming a firstclass success. It is a want of faith as to the practicability of making their calling profitable. It prevails to-day more extensively than ever before, and is undoubtedly due to the sharper competition that the farming business has been subjected to, and to other causes that need not be named here. The infection of this infidelity has extended to nearly all the agricultural press, more's the pity, and it is high time that efforts be made to counteract it. If no about the farmer's hard lot, and about the wrongs heaped upon him, and about impossible remedies, farming as a whole would be paying far better than it is doing at

But good farming pays. "What do you mean by good farming?" asks one.

Have you not yet learned what good farming is? Do you regard agriculture as an unprogressive science or business that remains the same while everything around it changes? If you see it in that light then your question is entirely in order. You do not know what good farming is.

In agricultural implements and labor-saving machinery connected with farming there has been estounding progress. But this itself is not improved farming. It only furnishes the means to make better farming possible. In fact, by enlarging the areas of land under cultivation, labor saving farm implements are apt to make farming poorer rather than better. And the great difficulty with the farming business at present is that American inventions in harvesting machinery have gone all over the world. They are used in Australia, India and on the plains of Russia almost as freely as by the farmers of our own country.

While it has just been asserted that good farming pays, something else might be put in with mere good farming to make it pay better. That something else is personal thought and skill, such as has never before been demanded in the farmer's business. The old idea of farming, and for its time the correct idea, was that it was mainly hard work. The method of farming ran in ruts and when a man got into one of these all he had to do was to pull ahead. He need not even plan. The rut was all sufficient to direct his course. The man who got up earliest, worked hardest and longest, made the most money. He was for these facts the good farmer, and therefore successful,

Hard work never has been and never will be entirely eliminated from tilling the soil. Thorns and thistles and weeds it produces as it always has done, and it is still in the sweat of his brow that the soil tiller eats his bread. But we have relieved the farmer from more toil than would once have been thought possible, only it operates pretty impartially upon farmers of all lasses. The better farming now needed must be the individual work and thought of the farmer himself. If he cannot plan, calculate and judge about the details of his business, he is in no better shape for success than his unskilled competitors, who perhaps work harder and for less wages

than he. It must be admitted that all farming does not pay. It is scarcely probable that farming reckened as a whole pays. This last is a sad thing to ponder over-a calling that does not pay as a whole! A calling in which some men make money, but taken as a whole the calling is a failure! Is there no remedy for this state of affairs! The writer thinks there is. It can not be found in the way that many now propose-many who are not themselve farmers -- but it must

facilities and improved methods. There There was nothing complicated about it, was never before a time when sound, practite butter could have been sold at prevail- creature known by different local names—a have presented no argument in favor of tical farm talk was more important than it is now. When farmers are getting out | sult of extra and intelligent care on the part of old ruts, as most of them are now obliged to do, it is more necessary than ever that they should start in new paths where they will not at once run on unknown breakers. Laving hold of every advantage that tends to cheaper production is good farming, and that, associated with intelligent management and strict attention to one's own business, invariably pays.

SETTLE THE SURROUNDINGS.

It is well enough to push a city ahead for all it is worth. It is foolish to sit back and murmur against any city, as some are doing, to the effect that the city is outgrowing the country, and therefore cannot long re main a success. And yet the country ought to grow in population and rural industries as rapidly as the city grows, in order that it may figure as an aid to the city. How is this desirable condition of affairs to be brought about? A good country will naturally settle up of itself after a time, but that kind of thing moves slowly, therefore, it is to the interest of the city people to push it all they can. In former articles we have shown that her surrounding trucking interests were worth to the city of Mobile. Ala., at least \$100,000 annually, but that thing didn't come all of itself. Twenty years ago those trucking interests were not worth so much as \$10,000 to that city, but the city people, seeing what there might be in t to themselves, went to work encouraging the industry, and now they are reaping their reward.

As yet our young and flourishing Texas cities have not given much thought to the surrounding country lying beyond their own additions to the cities. These town additions may be all well enough in their way, but they are not enough. We must fill up all the country round about, to supply us with rural products, thus cutting off the need of sending our money away to distant regions for necessary supplies. Nothing so helps a region of country as keeping most of its money at home.

On several occasions heretofore we have handled this same subject, and our excuse for recurring to it again to-day may be found in a recent issue of the Tampa (Fla.) Tribune. So far as relates to rural surroundings the city of Tampa has long been about in the same boat as is carrying many of our Texas cities. The surrounding country is thinly settled, with no particular indications of fresh growth. But now comes the paper referred to stating that a Mr. S. A. Jones tells the editor of a new arrangement being made by himself looking to an influx of rural population about Tampa. He is offering a large body of land near town, entirely free, to a German colony that will take it and embark in the business of growing fruits and vegetables. The Tribune adds.

He will also probably furnish them with free transportation over here and will aid and encourage them in every possible way. He says this plan has been worked successfully in the West, and he wants to give it a trial here. The location of the land has not yet been decided on, but it will be lo-cated somewhere on Tampa bay. Mr. Jones thus adds another laurel to his wreath as the great boomer of Tampa and South Florida.

How would something like that do for Fort Worth? We may not have the individuals willing to exactly pattern after Mr. S. A. Jones of Tampa, Fla., but we certainly have close around us plenty of good lands as yet unoccupied. No doubt considerable tracts of these lands might be cheanly bought. We often raise among ourselves considerable sums of money to be employed in advertising our? immediate region. This is all first-rate so far as it goes; but is not it rather possible that we might decidedly and permanently interest people at a distance more than we have peretofore been doing, through all our advertising, by substituting now and then for our usual gift of advertising pamphlets and circulars, a few thousand dollars worth of

good Tarrant county lands! The lands could be given away under cerain stipulations, of course, hence the gift would be sure to bring in telling returns to the city. If the people didn't stay upon the lands and improve them according to contract they would fall back to the donors to be given to other parties willing to come up to agreement. If they remained all right the city would have their influence as in-

terested citizens, and their patronage. While we cannot lay claim to understanding much about such things, our crude way of thinking leads us to feel that the gift of homesteads in Tarrant county, to colonies of desirable people, would redound substantially to the good of Fort Worth and prove, at the same time, about the best method of advertising our \*rural possibilities that could be resorted to. Each colony so established would be a standing advertisement making itself seen, and each colonist would be an agent to read to everybody whose attention could be secured.

A people to be entirely prosperous must produce something: that is, something of value must be originated by them. We have no mines to work with this object in view, neither have we great forests of imber to convert into materials started out upon commerce from an original source. Manufacturing is good so far as it goes, but manufacturing from materials shipped in from a distance is not production-it is simply changing into some other form a naterial already started upon the tide of ommerce. We must start something upon that tide ourselves, and since our soil offers us the only extensive source from which that something can be obtained, the sooner we get people digging into it for that something, on a large scale, the better it will be for us, undoubtedly. It is a thing of too much importance to justify much holding back on the first cost of setting the ball in motion. A fair start is the only thing needed-after that the ball will roll of itself. getting larger the further it rolls.

# THE WIFE IN FARM PROFITS.

It is stated by the Baltimore Sun's agricultural editor that the farmer's wife cuts a far more important figure, so far as relates to farm profits, than is generally supposed. For instance, though the farmer may get his rightful share of the usual profits by working properly and planning properly, and properly understanding all matters connected with marketing, yet if the housewife does not supplement his its home anywhere over there, and is alefforts with close attention to her departments, there cannot be otherwise than an important shortage in consequence. The writer had in his mind's eve a farmer who invariably received 5 cents above the market price for his butter, from the fact that | ins further east get into company with his city customers found that the quality was the same throughout the year, and as performed its functions the flower stem | consisted of one copper still of 100 gallons | the intelligent employment of improved | good as any to be found in market. Now | Texas, and the "red bug" of the Southern

this extra 5 cents was all clear profit, for ing prices, and that extra profit was the reof the farmer's wife, who presided over the butter making. Of course this was but one item-doubtless her extra and intelligent care told in the same direction in many additional items.

Our cotemporary says he can call to mind many very similar cases. To give an idea of them he says Mr. A and Mr. B and Mr. C bring butter to town that always sells at sight. The butter has a reputation for cleanliness and excellence. There is nothing extra about the gentlemen bringing it in, neither is there about their cows, but Mrs. A or Mrs. B or Mrs. C made the butter and handled it well, and that's what makes it go off so readily. The ladies have given it a deserved reputation that invariably finds it customers.

#### NEW USE FOR OLD TIN CANS.

A correspondent of the Farmers' Herald says he gathers up the old tin cans on the iumping grounds and at other places about town, and makes a good use of them in his gardening operations. Pint and quart cans such as have held fruits, vegetables, fish, oysters, yeast powders, and so on, are the kinds he collects. First he throws them into a fire built out of doors for the purpose. this melts off the solder, which lets the bottoms drop off and causes them to open at the side seam. He then ties a bit of cotton twine around one end to hold the can together, after whichhe sets it in his cold frame or hot bed, fills it with good garden soil, and into each can sets a small tomato or other plant intended for the garden. When this has grown sufficient he lifts the can out containing it, places it in position in the garden, packs the soil around the can, waters thoroughly inside and out, and leaves undisturbed for two or three days The plant goes on growing the same as if it had not been moved. At the end of the time named he clips off the twine, spreads the can a little, and lifts it leaving the plant undisturbed. nor check of Neither wilting growth results, which enables him to gain no little on the time of the plant's maturity, compared to what would happen had

it been transplanted on the old plan. The gentleman also finds these cans useful in fencing off cutworms from plants. He opens the can and slnks it around the plant. leaving two or three inches of the edge standing above ground. When the plant has grown beyond danger from cutworms, the can is opened and taken away. No cutworm will climb over the can to get at the plant.

We have ourself often used circles of tin for fencing off cutworms on the plan proposed, and found it a splendid success. Unless the worm happens to be fuside the inclosure when it is put down, which seldom happens, the plant will be entirely safe, for it will never climb over. Smalle cans than the sizes named could be used for fencing off cutworms.

#### OUR CORRESPONDENTS.

This department is devoted to answering This department is devoted to answering such questions as may be asked by our subscribers, which may be of general information. Inquiries of personal character that require answer by mail should always have stamp inclosed. Please give full name and postomes address in addition to any such signature as "Subscriber," or "A. G. D." not for publication, if against the will of the writer, but to aimit of direct communication should such a thing be deemed necessary. Address as directed at head of this page. of this page.

ALL ABOUT THE "CHIGGER."

As you appear to be an adept at teiling your patrons all they ask to be told with reference to bugs and other creeping things, I, as one of your patrons, would like to have you let out a little concerning that excruciating natural product of Texas known as the chigger. It is not a large known as the chigger. It is not a large creature, but it is red-hot, what there is of It has no wings, but as you lately the has no wings, but as you takely stated in a practical quotation, referring to another but larger wingless bug, "it gets there all the same." I don't know that the subject suggested by me could be strictly classed as an agricultural subject, and yet I am by no means sure it could not, as we all understand that there is a "chigger reach" receiving won the realize of Tays. weed" growing upon the graines of Texas— a weed upon which chiggers do most de-delight to congregate. It seems to be a weed all the chiggers' own, as no other liv-ing creature appears to have any use for it, therefore since the chigger weed is the chiggers' weed, who will have the hardihood to assert that the chigger does not raise its own weed! If it does, then, of course, the chigger is an agriculturist, and a legitimate subject for agricultural litera-ture. I rather think the chigger is an agri-culturist, for I find it freely admitted to our Alliance meetings. I am an Alliance man myself. I attend the meetings regu I am an Alliance larly, walking across a mile or so of prairie to do it. I mention this mile or so of prairie to show how earnestly devoted to the cause am I. Well, I always find the chig ger well represented when I get there, and how could this be thus were the chigger not an agriculturist Tarrant county, Texas.

There are no chiggers in Texas. Don't be startled. Give us time to explain. The chigger (also written chigge) is a small insect native to the West Indies and South America-so say our best authorities. It attacks the feet of man, penetrating the skin and rearing a numerous progeny under it. Unless promptly removed it is the cause of troublesome sores, which, if neg

lected at first, are troublesome to heal (see But there is an animal here that our people erroneously call a "chigger." It is not large animal-not near so large as an elephant-but it is a host within itself when one concludes to take numbers into consideration. While individually not so large as an individual elephant, as we have already intimated, it would be entirely safe to assert that were all the "chiggers" of Texas thrown together into one mass they would be larger in bulk than would be all the elephants roaming over our prairies under a similar manipulation. Of course this offers an argument well calculated to establish the fact that we have the "chigger" in numerous representation.

The "chigger," so called, is, as such strictly confined to Texas, the upper Southern states and the southern borders of some of the lower Northern states. You never hear of it in the lower Southern states east of the Mississippi river, but you there hear of something else: the "red bug." There are more "red bugs" to the square inch in either Louisiana, Alabama, Mississippi. Georgia, Fiorida, South Carolina and North Carolina, than there are "chiggers" to the square mile in Texas. The "red bug" has ways at home to callers-the "chigger" of Texas has its home in partially shaded places only, and while usually at home when called upon, one don't get into its company near so often here as do our coustheir "red bug."

To shorten a long story, the "chigger" of

states further east, is one and the same strong argument in favor of scientific names universally employed, that can be referred to when one is in doubt relative to a species. The scientific name of the "chigger," alias "red bug," is Leptus irritans.

We may state that the "chioger" is well known to Southern people, and to city or town people who visit the country, and yet it is not well known. The first comes of the fact that it is a ruralist, with its home in the country, and the second comes of the fact that it is too small to admit of such study with the naked eye as would enable us to know it at sight, were it to suddenly assume the proportions of an ex and meet us face to face in the road. What we see of it is a little red speck about the size of the point of a fine needle, always on the run and always making splendld time for an animal of its size. If it were the size of a horse and made such time in proportion to pays as well, why are we not now having size as it now makes, it would gallop across the landscape at the rate of seventy-five | we have been working the sorghum same miles to the hour.

But small as the "chieger" appears to | tive years? he naked eye, it does not seem correspondngly light when out on a journey across the unprotected cuticle of a fellow. It runs as roughly, in proportion to size, as dragging a dead hog the wrong way of the hair over a freshly cut grass stubble. You feel every step it takes, and they come down with an apparent weight that gets you interested from the very start, and keeps you that way until it has located a claim to its liking, and has commenced the work of boring an artesian well, Even then your interest does not abate; indeed, you feel a deeper interest in its performance after it has located than you felt before. But you know how it is yourself, therefore we need not cause the printer to use any more of his types in telling what to you could not be otherwise than an old story.

The true chigger of the tropics classes

entomologically with the fleas, and there-

fore has no relationship whatever with the North American insect that we call by the same common name. Its scientific name is Pulex penetrans. Our "chigger" is simply a minute tick, with variations. It inhabits vegetation like the ticks, drops off and goes along with you when you pass that way like the ticks, bites you like the ticks, and, like the ticks, sacrifices its life to one square meal, for it feeds but a single time. But under the microscope it don't much look like a tick. It is put up on a much stronger plan-in fact it is built as much for strength, proportionately, as a railroad locomotive. No race-horse peculiarities about it, hence its extraordinary get-up-and-get is entirely the result of main strength. It has six great, lubberly, long and unshapely legs, as seen under the microscope-but for these, and for a head that looks somewhat like the head of a cabbage, its general make-up would much remind one of a pretty little red turtle. It would be rather a beauty but for those legs and a pair of cow-hornish nippers that come out from the cabbage-head end of it. But really those nippers are not ugly-they are scary to look upon, that's all. They are kept polished up to a high degree and are ever held ready for business. Nature's aim in giving it those polished nippers can be readily understood, but when we come to a close examination of the legs we find something well calculated to puzzle us. The legs are thickly set, from their junction with the body to their ends, with sharped booked clays. What office those claws are intended to fill in the economy of nature would spring a question not easily settled. We well know of one office that they do fill-it is those claws that keep us so well posted relative to how a "chigger" that has cast his lot with us is getting along in his travels. He the fellow with his spurs always on, and a regular full store stock of spurs, at that. Possibly to claw us is what those claws are for-it gives us timely warning of the enemy's presence, keeps us posted with reference to his movements, and hence invests the invasion with a seemingly greater degree of fairness than would otherwise

characterize the campaign. Of course there is no way of stamping out the "chigger." Texas can't do anything at it by offering a premium on "chigger" scalps, especially now that she has so much on her hands in the jack-rabbit scalp industry. The United States government might be willing to appropriate a few thousand to run a commission of Northern men down for the purpose of blowing it into smithereens with dynamite, or something of that sort, after she gets through with the rain makers, but the good fortune of the rain makers in striking a rain period for their experiments will not be likely to let the government out of the rain manufacturing business very soon, therefore it is not probable that we need build very high hopes for speedy relief from that direction. Possibly the government might be willing to pay some inventor for a few patent scratching machines for us just now-anything to break the crust of the

solid South, you know, Viewing the case from every attainable standpoint, we cannot help being forced into the opinion that the "chigger" is here to stay. Already it has stayed a very long time-we got it when we got the country. It is one of the things that our forefathers took away from the Indians, or to Texas. Few persons care much about who do care for it have an infallible prethe latter part of April to the middle of August. If this happens to be inconvenient, and there exists a sufficient interest in the matter to justify the trouble, smoking one's self for a few minutes over burning tobacco before going forth into the "chigger" regions, will lead the festive little creatures to feel that we are not the kind of person that they would like to take up with, so they will give us the cold shoulder and stick to their "chigger weeds."

# SUGAR FROM SORGHUM

Several articles of yours appearing in the Fort Worth GAZETTE have been in strong advocacy of tropical sugar-cane as a great sugar crop for Texas, but as yet I great sugar crop for Texas, but as yet I have seen nothing from you boosting Chinese sugar-cane in the same direction. Why not urge the cultivation of Chinese sugar-cane instead of tropical sugar-cane as a sugar crop! It costs less to grow than tropical cane, as it grows from seed, and I have no doubt but that it is equally as good a sugar plant. Not long ago I was shown as fine a sample of granulated sugar as any one need wish to look at, that had been made from Chinese sugar-cane. made from Chinese sugar-cane.

C. O. NOYES. Just so. We have ourself seen fine sainples of sugar said to have been made from sorghum ("Chinese sugar cane"), and we have also seen samples of gold that had been diately from the sea is more or less charged

as good as any gold, yet that fact should abandoning all the gold mines of the world to work the sea for gold. You a n r t gold from sea water by proper chemical manipu lation, but to do so costs very much more than the gold is worth when obtained; and with sugar it is much the same way. You may obtain granulated sugar from sorghum. or from any other thing containing starch, but there are only a few sources from which it can be obtained at paying figures. Tropical sugar cone is known to be one of these sources, while past experience has protty clearly proved, at very heavy ex-

pense, that sorghum is not. We don't at all object to sorgham as a crop from which to manufacture sorehold molasses, but we could never think of recommending its culture with a view the production of granulated sugar. If it makes as good sugar as tropical cane. an sorghum sugar in the majority, seeing as question regularly through the past two

#### GOOD WATER FOR THE HORSES.

I was indeed much pleased to see an article in your columns hast week suggesting the putting up of a nice drinking four for horses on our public square, to be regularly supplied with pure artestan water. Since reading the article, my self and a may friend have visited the old trough cathe square for the purpose of making observasquare for the purpose of making observations. It is indeed a disprace to such a progressive city as For. Worth, While we
were there several horses were driven up
to drink. The drivers had to get out and
loosen the reins before the horses could set
their heads down to the old dirty trount,
and when their heads were down it was
plain to see that the poor animals would
not have taken a drop of the water if they
could possibly have helped it. They put
their noses down to the water, smelled it,
and then flirled them about in the water as
if attempting to knock off a "seum," after
which they partook sparingly. An "express" driver said we were seeing the ar
rangement "in its most dandy light," as the
water was not now as heavily charged with water was not now as heavily charged wit und as usually characterized it. Danger of lying from thirst would be the only thing calculated to make a man partials of such ater-why will man force his thewould not not touch, simply because he has that friend helpless within his power, e-socially when it could so easily be avoided Let us show a humane feeling for the durch prates serving us so faithfully, by proving ng them with a decent drinking fout. Who praiseworthy movement?

ANOTHER LADY.

We are in earnest accord with any movement having kindness to dumb brutes at the bottom of it. Then this suggested movement would extend a little beyond the benefit proposed, for it would be telling of a city inhabited by a humane people. The stranger visiting a strange place takes notes of all these things.

Fort Worth, Tex.

Not a few cities are now evincing much pride in their public watering places for dumb brutes. It seems to be largely a modern movement. A few years ago the city of Mobile, Ala. .(we refer especially to that city on account of our familiarity with it). had a stock-watering arrangement a good deal on the plan of what we now have in Fort Worth. Finally the new Bienville waterworks were completed, giving the place an abundant supply of pure water, and then some one suggested that the horses so faithfully giving their services to the city ought to have a supply of the same pure water that their masters were using. There was no particular agitation of the matter for a few months, but finally something happened that set everybody talking. There arrived by railroad from some distant city a strange-looking arrangement, all boxed up and directed to Bienville square, Mobile, Ala. A heavy team hauled it up from the depot to the square, where the oxing was taken off, revealing a huge from concern shaped about like a pedestaled fruit dish, and measuring some six feet across the top of the bowl. The interior of the bowl was plain, but around its outside the molder had made it highly ornamental, and had furthermore cast upon it the legend: "Presented to the horses of Mobile

by a lady." It was set into position at the side of the square, pipes attached, pure Blenville water turned in and the horses of that see tion of the city made happy.

Other similar watering fonts soon followed until there are now quite a number of them located about the place. The old watering troughs have all disappeared.

Of course we are not taking the position that the people of Fort Worth ought to so into anything so expensive, but we fully agree with our correspondents that some thing better than we now have is greatly needed. It could not cost much to set up a respectable trough, sufficiently elevated for the convenience of both the horse and his driver and constantly supplied by an inflow of pure artesian water.

In a recent teachers' examination the following questions were set: I. Has this section of Texas a high or a low dew-point? 2. What does this indicate as to climate! As no answers to these questions can be found in the text-books in general use, you will confer a favor on a number of teachers by answering them through Tuz Gazzava Fort Worth, Tex.

If we understand you correctly we may state that this section of Texas has a comparatively high dew-point-much higher than that of the more humid regions near the sea. The explanation is easy. Dew. as away from the Mexicans, so far as relates | you well know, is the result of a variation in temperature as existing in the atmosit, one way or the other, however. Those | phere and the earth. When the earth be comes colder than the atmosphere immeventive in keeping out of its haunts from | diately in contact, with it, moisture is con densed from the atmosphere to lie upon the earth as dew. A picture of lee-water clear ly illustrates the thing; it condenses moisture from the warmer atmosphere in contact with it until its exterior is covered with water. In common versacular we say "the pitcher is sweaty," but not so-it is simply collecting dew from the air. Now. the atmosphere rolling off the sea and more or less charged with moisture cannot do otherwise than have a lower temperature than would atmosphere rolling over an interior region and carrying less moisture. In order to bring about condensation from that colder atmosphere it would be necessary to have a colder earth to break the equilibrium than would be needed under the warmer atmosphere, hence the colder the atmos phere the lower the earth dew-point.

The temperature of the atmosphere coming from the sea is invariably lower in regions where it first strikes the land than is an interior atmosphere, particularly at night, when not influenced by the sun. There are two reasons for this: First-The sea having a temperature lower than the summer air, cools the air in immediate contact with it well down towards its qwa temperature. Second-Atmosphere immemade from sea water. The gold was just | with water, and water invariably maintains